



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Division**

**Processed
Products
Branch**

United States Standards for Grades of Canned Cream Style Corn

Effective date July 1, 1957

This is the fifth issue, as amended, of the United States Standards for Grades of Canned Cream Style Corn published in the **FEDERAL REGISTER** of May 22, 1957 (22 FR 3535) to become effective July 1, 1957. This issue supersedes the fifth issue, which has been in effect since July 27, 1953.

Voluntary U.S. grade standards are issued under the authority of the Agricultural Marketing Act of 1946, which provides for the development of official U.S. grades to designate different levels of quality. These grade standards are available for use by producers, suppliers, buyers, and consumers. As in the case of other standards for grades of processed fruits and vegetables, these standards are designed to facilitate orderly marketing by providing a convenient basis for buying and selling, for establishing quality control programs, and for determining loan values.

The standards also serve as a basis for the inspection and grading of commodities by the Federal inspection service, the only activity authorized to approve the designation of U.S. grades as referenced in the standards, as provided under the Agricultural Marketing Act of 1946. This service, available as on-line (in-plant) or lot inspection and grading of all processed fruit and vegetable products, is offered to interested parties, upon application, on a fee-for-service basis. The verification of some specific recommendations, requirements, or tolerances contained in the standards can be accomplished only by the use of on-line inspection procedures. In all instances, a grade can be assigned based on final product factors or characteristics.

In addition to the U.S. grade standards, grading manuals or instructions for inspection of several processed fruits and vegetables are available upon request for a nominal fee. These manuals or instructions contain detailed interpretations of the grade standards and provide step-by-step procedures for grading the product.

Grade standards are issues by the Department after careful consideration of all data and views submitted, and the Department welcomes suggestions which might aid in improving the standards in future revisions. Comments may be submitted to, and copies of standards and grading manuals obtained from:

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United States Standards for Grades of Canned Cream Style Corn

Section	Page No.
§52.851	Identity. 2
§52.852	Colors of canned cream style corn. 2
§52.853	Grades of canned cream style corn. 2
§52.854	Fill of container for canned cream style corn. 3
§52.855	Ascertaining the grade. 3
§52.856	Ascertaining the rating for the factors which are scored. 3
§52.857	Color. 3
§52.858	Consistency. 4
§52.859	Absence of defects. 5
§52.860	Tenderness and maturity. 6
§52.861	Flavor. 7
§52.862	Ascertaining the grade of a lot. 8
§52.863	Score sheet for canned cream style corn. 9
Authority:	Agricultural Marketing Act of 1946, Secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended (7 U.S.C. 1622, 1624).

Note: Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

§52.851 Identity.

Canned cream style corn means the canned product properly prepared from the clean, sound, succulent kernels of sweet corn as defined in the definition and standard of issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§52.852 Colors of canned cream style corn.

- (a) White.
- (b) Golden or yellow.

§52.853 Grades of canned cream style corn.

- (a) **U. S. Grade A** or **U. S. Fancy** is the quality of canned cream style corn that possesses similar varietal characteristics; that is tender; that possesses good color; that possesses a good consistency; that is practically free from defects; that possesses a very good flavor; and that for those factors which are score in accordance with the scoring system outlined in this subpart the total score not less than 90 points: **Provided**, that the cream style corn may possess a good color, a reasonably good consistency, a good flavor, and may be reasonably tender, scoring not less than 26 points if the total score is not less than 90 points.
- (b) **U. S. Grade B** or **U. S. Extra Standard** is the quality of canned cream style corn that possesses similar varietal characteristics; that is reasonably tender; that possesses a reasonably good color; that possesses a reasonably good consistency; that is reasonably free from defects; that possesses a good flavor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: **Provided**, that the cream style corn may possess a fairly good color, scoring not less than 7 points if the total score is not less than 80 points.
- (c) **U. S. Grade C** or **U. S. Standard** is the quality of canned cream style corn that possesses similar varietal characteristics; that is fairly tender; that possesses a fairly good color; that possesses a fairly consistency; that is fairly free from defects; that possesses a fairly good flavor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.
- (d) **Substandard** is the quality of canned cream style corn that fails to meet the requirements of U. S. Standard and may or may not meet the minimum standards of quality for canned cream style corn issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§52.854 Fill of container for canned cream style corn.

The standard of fill of container for canned cream style corn is not incorporated in the grades of the finished product, since fill of container, as such, is not a factor of quality for the purpose of these grades. The standard fill of container for canned cream style corn is a fill of not less than 90 percent of the total capacity of the container. Canned cream style corn that does not meet this requirement is **Below standard in fill**.

§52.855 Ascertaining the grade.

- (a) The grade of canned cream style corn is ascertained by considering, in conjunction with the requirements of the respective grade, the ratings for the factor of color, consistency, absence of defects, tenderness and maturity, and flavor.
- (b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factor:	Points
Color	10
Consistency	20
Absence of defects	20
Tenderness and maturity	30
Flavor	<u>20</u>
Total score	100

§52.856 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is exclusive (for example, 18 to 20 points" means 18, 19, 20 points).

§52.857 Color.

- (a) **"A" classification.** Canned cream style corn that possesses a good color may be given a score of 9 or 10 points. **Good color** means that the cut kernels possess a practically uniform color typical of tender sweet corn and that the product is bright and is practically free from **off - variety** kernels.

- (b) **"B" classification.** Canned cream style corn that possesses a reasonably good color may be given a score of 8 points. **Reasonably good color** means that the kernels possess a reasonably uniform color typical of reasonably tender sweet corn, and that the product may lack brightness but not to the extent that the appearance is materially affected, and is reasonably free from **off - variety** kernels.
- (c) **"C" classification.** Canned cream style corn that possesses a fairly good color may be given a score of 6 to 7 points. Canned cream style corn that scores 7 points in this classification shall not be graded above U.S. Grade B or U. S. Extra Standard, and if scored 6 points in this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly good color** means that the kernels possess a fairly uniform color typical of fairly tender sweet corn and that the product may be dull, but not to the extent that the appearance is seriously affected, and is fairly free from **off - variety** kernels.
- (d) **"SStd" classification.** Canned cream style corn that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 5 points Substandard, regardless of the total score for the product (this is a limiting rule).

§52.858 Consistency.

- (a) **General.** The factor of consistency refers to the viscosity of the product, to the degree of smoothness, and to the separation of free liquor.
- (b) **"A" classification.** Canned cream style corn that possesses a good consistency may be given a score of 18 to 20 points. **Good consistency** means that the canned cream style corn, after stirring and emptying from the container to a dry wet surface, possesses a heavy cream like consistency, with not more than a slight appearance of curdling, forms a slightly mounded mass, and that at the end of two minutes after emptying on the dry flat surface there is practically no separation of free liquor.
- (c) **"B" classification.** If the canned cream style corn has a reasonably good consistency a score of 16 to 17 points may be given. **Reasonably good consistency** means that the canned cream style corn, after stirring and emptying from the container to a dry flat surface, has a reasonably good creamy consistency, with not more than a moderate appearance of curdling, may flow just enough to level off to a nearly uniform depth or may be moderately stiff and moderately mounded, and that at the end of two minutes after emptying in the dry flat surface there may be a slight separation of free liquor.

- (d) **"C" classification.** Canned cream style corn that has a fairly good consistency may be given a score of 14 to 15 points. Canned cream style corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly good consistency** means that the canned cream style corn, after stirring and emptying on a dry flat surface, may be thin but not excessively thin, or thick but not excessively pasty, or crumbly, or moderately but not excessively curdled, and that at the end of two minutes after emptying on the dry flat surface there may be a moderate but not excessive separation of free liquor. The approximate circular area over which the product spreads when emptied in a dry flat surface shall not exceed 12 inches: **Provided**, that when the washed, drained residue of canned cream style corn contains more than 20 percent of alcohol insoluble solids, the average diameter of the area over which the product spreads shall not exceed 10 inches.2/
- (e) **"SStd" classification.** Canned cream style corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule), and may also be graded **Below Standard in Quality** for the following reason: Excessively liquid.

§52.859 Absence of defects.

- (a) **General.** The factor of absence of defects refers to the degree of freedom from pieces of cob, silk, husk, or other harmless extraneous vegetable matter, from pulled kernels, and from discolored kernels or other defects.
- (b) **"A" classification.** Canned cream style corn that is practically free from defects may be given a score of 18 to 20 points. **Practically free from defects** means that pieces of cob, silk, husk, or other harmless extraneous vegetable matter, pulled kernels, discolored kernels, or other defects may be present that do not more than slightly affect the appearance or eating quality of the product.
- (c) **"B" classification.** If canned cream style corn is reasonably free from defects, a score of 16 to 17 points may be given. Canned cream style corn that falls into this classification shall not be graded above U. S. Grade B or U. S. Extra Standard, regardless of the total score for the product (this is a limiting rule). **Reasonably free from defects** means that pieces of cob, silk, husk, or other harmless extraneous vegetable matter, pulled kernels, discolored kernels, or other defects may be present that do not materially affect the appearance or eating quality of the product.

(d) **"C"classification.** Canned cream corn that is fairly free from defects may be given a score of 14 to 15 points. Canned cream style corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly free from defects** means that pieces of cob, silk, husk, and other harmless extraneous vegetable matter, pulled kernels, discolored kernels, or other defects may be present that do not seriously affect the appearance or eating quality of the product, and that,

(1) For each 20 ounces of net weight there may be present:

(i) Not more than 1 cubic centimeter of pieces of cob: 2/ and

(ii) Not more than 1 square inch (1" x 1") of husk; 2/ and that

(2) For each 2 ounces of net weight there may be present:

(i) Not more than 1 brown or black discolored kernel or piece of kernel; 2/ and that

(3) For each 1 ounce of net weight there may be present:

(i) Not more than 6 inches of silk. 2/

(e) **"SStd" classification.** Canned cream style corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total product (this is a limiting rule), and may be also graded **Below Standard in Quality** for the applicable reasons:

(1) Excessive discolored kernels.

(2) Excessive cob.

(3) Excessive husk.

(4) Excessive silk.

§52.860 Tenderness and maturity.

(a) **"A"classification.** Canned cream style corn that is tender may be given a score of 27 to 30 points. **Tender** means that the kernel are in the milk, early cream, or middle cream stage of maturity, have a tender texture, and that pieces of the interior portion of corn kernels or ground kernels are characteristic of sweet corn in the milk, early cream, or middle cream stage of maturity.

- (b) **"B" classification.** If the canned cream style corn is reasonably tender a score of 24 to 26 points may be given. Canned cream style corn that scores less than 26 points in this classification shall not be graded above U.S. Grade B or U. S. Extra Standard, regardless of the total score for the product (this is a limiting rule). **Reasonably tender** means that the kernels are in the stage of maturity, have a reasonably tender texture, and that pieces of the interior portions of corn kernels or ground kernels are characteristic of sweet corn in the middle cream to late cream stage of maturity.
- (c) **"C" classification.** Canned cream style corn that is fairly tender my be given a score of 22 to 23 points. Canned cream style corn that falls into this classification shall not be graded above U.S. Grade C or U.S.Standard, regardless of the total score for the product (this is a limiting rule). **Fairly tender** means that the kernels are in the early dough or dough stage of maturity, may be firm but not hard or tough, and that pieces of the interior portions of the corn kernels or the ground kernels are characteristic of sweet corn in the early dough or dough stage of maturity. The weight of the alcohol insoluble solids of the washed, drained material^{2/} does not exceed 27 percent of the weight of such material.
- (d) **"SStd" classification.** Canned cream style corn that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 21 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule), and may also be graded **Below Standard in Quality**.

§52.861 Flavor.

- (a) **General.** The factor of flavor refers to the palatability of the product. The natural flavor of the sweet corn and the effects of added sugar (sucrose) and salt are considered in evaluating this factor.
- (b) **"A" classification.** Canned cream style corn that possesses a very good flavor may be given a score 18 to 20 points. **Very good flavor** means that the product including added seasoning ingredients has a very good characteristic flavor and odor typical of tender canned sweet corn.
- (c) **"B" classification.** If the canned style corn possesses a good flavor, a score of 16 to 17 points may be given. **Good flavor** means that the product including added seasoning ingredients has a good characteristic flavor and odor typical of reasonably sweet corn.

- (d) **"C" classification.** Canned cream style that possesses a fairly good flavor may be given a score of 14 to 15 points. Canned cream style corn that falls into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). **Fairly good flavor** means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.
- (e) **"SStd" classification.** Canned cream style corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§52.862 Ascertaining the grade of a lot. The grade of a lot of canned cream style corn covered by these standards is determined by the procedures set forth in the Regulation Governing Inspection and Certification of Processed Products Thereof, and Certain Other Processed Food Products (§52.1 to §52.83).

§52.863 Score sheet for canned cream style corn.

Number, size and kind of container			
Container mark or identification			
Label			
Net weight (ounces)			
Vacuum (inches)			
Color (white or golden)			
Factors		Score points	
Color	10	"A" 9-10 "B" 8 "C" 6-07 <u>1/</u> "SStd" 0-05 <u>2/</u>	
Consistency	20	"A" 18-20 "B" 16-17 "C" 14-15 <u>2/</u> "SStd" 0-13 <u>2/</u>	
Absence of defects	20	"A" 18-20 "B" 16-17 <u>2/</u> "C" 14-15 <u>2/</u> "SStd" 0-13 <u>2/</u>	
Tenderness and maturity	30	"A" 27-30 "B" 24-26 <u>1/</u> "C" 22-23 <u>2/</u> "SStd" 0-21 <u>2/</u>	
Flavor	20	"A" 18-20 "B" 16-17 "C" 14-15 "SStd" 0-13 <u>2/</u>	
Total score	100		
Grade			

1/ Indicates partial limiting rule.

2/ Indicates limiting rule.

Recodified in the Federal Register of December 9, 1953 (18 F.R. 7963)
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